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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/712,851

11/12/2003

Shane Ching-Feng Hu

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7590

09/09/2004

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EXAMINER

NGUYEN, VIET Q

ART UNIT

PAPER NUMBER

2818

DATE MAILED: 09/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/712,851

Applicant(s)

HU, SHANE CHING-FENG

Examiner

Viet Q Nguyen

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-23 and 30-35 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 12 and 30 is/are rejected.
- 7) ☒ Claim(s) 13-23 and 31-35 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/17/2004.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claims 12-23 and **30-35** are present for examination.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims **12** and **30** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lien et al (6,128,207)** and **Schoy (6,349,049)**.

Lien et al (see Fig.3A) clearly shows a static CAM array having word lines, bit lines, a storage latch (formed by transistors 110,111, 112, and 113) having complementary data nodes capacitively coupled to ground, first and second access transistors (114,115), each having a gate coupled to one of the word lines and coupled between a data node of the latch and a respective data line as claimed. Further, there is seen a match circuit comprising of transistors (116,117,118,119, and sensor 130) coupled to one of the data complementary nodes and for discharging the match line (150) in response to a data value and the data comparison value when there is a mismatching condition. For example, col. 7 (lines 28-36) specifically stated that “**...if the comparison data value does not match the data value stored in CAM cell 100, then a voltage of 0**

Volts is applied to node N3. Under these conditions, the voltage on match sense line (150) is pulled down to 0.3 Volts". Thus, it would have been obvious to one skilled in this art that the match line is discharged down to 0.3 Volts in case there is a mismatching condition based on the compare data value as recited.

Schoy (see Fig.3) clearly shows a static CAM array having word lines, bit lines, a storage latch (302, 304) having complementary data nodes capacitively coupled to ground, first and second access transistors (306,308), each having a gate coupled to one of the word lines and coupled between a data node of the latch and a respective data line as claimed. Further, there is seen a match circuit comprising of transistors (310,312,314,316, and 206) coupled to one of the data complementary nodes and for discharging the match line (ML) in response to a data value and the data comparison value when there is a mismatching condition. For example, col. 4 (lines 40-42) specifically stated that ***"...boost circuits 208a and 208b discharge the match line ML to ground potential or logic low to indicate the default mismatch condition"***. Thus, it would have been obvious to one skilled in this art that the match line is discharged down to ground in case there is a mismatching condition based on the compare data value as recited. Fig.4 also shows that the discharge transistor (408) coupled between the match line and ground as claimed.

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In regarding to other claimed features, the use of such CAM structure in any computer system or memory structure is well-known in the art and therefore inherent in these prior arts teachings.

3. Other claims contain allowable subject matter over prior arts of record.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Viet Q Nguyen whose telephone number is (571) 272-1788. The examiner can normally be reached on 7am-6pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (703) 308-4910. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


V. Nguyen
09/02/2004

Viet Q Nguyen
Primary Examiner
Art Unit 2818

